



Gender Differences in Factors Predicting Tendency Toward Drug Abuse Among Iranian University Students

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Received 2018 July 24; Revised 2018 October 23; Accepted 2018 November 05.

Abstract

Background: Drug addiction is a painful fact especially in the youth population. It is one of the main social, economic and hygienic problem, which has negative effects on the human life. Therefore, finding predisposing factors of addiction can help decrease this phenomenon. Family function and sensation seeking are two factors that seems to play a role in tendency towards drug abuse. Thus, the main purpose of this study was to investigate the relationship among tendency towards drug abuse, family function, and sensation seeking in university students and gender differences in prediction of tendency towards drug abuse.

Methods: In this descriptive-correlational study, a total of 350 university students were selected by the convenience sampling method in Yazd University. They were evaluated by Addiction Potential Scale (Weed, 1992), Family Assessment Device Scale (McMaster, 1983), and Sensation Seeking Scale (Zukerman, 1968). Data analysis was done by Regression Analysis.

Results: Findings showed that family function among female students and sensation seeking among male students is significantly related to the tendency towards drug abuse ($P < 0.05$); in addition, regression analysis showed that roles subscale of family function among female respondents and adventure subscale of sensation seeking among male respondents were predictors of tendency towards drug.

Conclusions: This study showed that sensation seeking as a personality factor and family function as an environmental factor can effect on student's tendency towards drug.

Keywords: Tendency Towards Drug Abuse, Family Function, Sensation Seeking

1. Background

Being located in vicinity of one of the greatest exporters of drugs, Iran is not only a transit route for drug trafficking but also a market for drug consumption. Regarding the young population of Iran, increased rate of unemployment, and other welfare-related problems of the young, the tendency to drugs is increasing among the population so that is observed the increase in the number of addicted individuals. It is not possible to make an exact estimation of this population due to some cultural backgrounds in Iran, particularly in cities with traditional context such as Yazd. Within the traditional and religious context of Yazd city, addiction is considered to be against the cultural norms and values of the town. Since Yazd is a passage for drug trafficking, the city has special conditions regarding the number of addicted individuals. Due to the considerable social and economic costs of drugs consumption and its negative effects on individuals' health and the crime rate, it is regarded as a serious threat to the society (1).

Students in universities are exposed to various internal and external pressures for the first time, which can be effective in their tendency toward drugs (2). On the other hand, although young population can be an opportunity in communities like Iran and cities like Yazd, this can raise vulnerability to drug use (3). Integration of youth with educational centers such as universities, which play undeniable roles in improving the knowledge, awareness, and attitude of young students, is very important (4).

There seems to be no agreement on the main reason for tendency toward drugs. Various factors such as individual backgrounds, family characteristics, and social and environmental factors can be effective in this respect (5).

One of the effective family factors, which can lead to young individuals' tendency toward drugs is family function. Family function depends on the ability of the family in problem-solving, communication, roles, affective, responsiveness, affective involvement, and behavior control in order to protect the whole family system (6).

Qualitative and quantitative differences in the above-

mentioned components can lead to formation of different personalities in family and, in some cases, to behavioral problems. Family functioning in a family with drug addiction may include inappropriate relationships, emotional mixture, role play, and behavior management compared to a family without drug related problems (7). Many of the factors protecting against drug use are corresponded with family functions while many of the threatening factors regarding drugs are corresponded with inappropriateness and weakness in family functions. In a study conducted by Shahriari et al. (8), the researchers concluded that there is a significant negative relationship between the tendency to drugs and close relationship among family members.

Sensation seeking is another important factor in the etiology of tendency to drugs. Zuckerman (1994) defines sensation seeking as “the tendency to excitement and various, new and complex experiments and intensive inclination to seeking physical, social, legal, and financial risk as a result of such experience”. Having employed factor analysis method, he identified four components of sensation seeking, namely experience seeking, adventure seeking, boredom susceptibility, and disinhibition (9). Since the sensation-seeking individual pursues new experiences, using drugs can serve him as a means of quick raise in excitation. According to Zuckerman(1979), one reason why sensation-seeking individuals find drugs so reinforcing is that low levels of monoamine oxidase enzyme allow them stronger effects, which serves as a means of escaping from uniformity. Zuckerman (1979) realized that sensation seeking varies as individuals turn older, and that young individuals have more inclination to seek new experiences (10).

Some studies have shown that sensation seeking, as a personal and biological factor, has a relationship with behaviors such as drugs abuse (11-13). In a research in Iran, Taremian et al. found out that the most important motivations for using drugs among Iranian students include “experiencing” (38.5%), “delightfulness of the drugs” and “having fun with friends” (28.5%), “achieving mental peace” (25%), and finally “having good feeling” and “reducing stress” (23.1%). This highlights the significant role of experience seeking and innovativeness in tendency to drugs (14).

Hence, with regards to the developing trend towards drugs, particularly among young students in Yazd, the role of investigating the issue in inhibiting the problem and the role of factors such as family function and sensation seeking in tendency toward drugs, as well as regarding the gap observed in previous research on simultaneous investigation of the effects of family function and sensation seeking as an environmental and personality factors among girls and boys, the current research is aimed at determining if family function and sensation seeking have effects on predicting male and female students’ tendency toward drugs.

2. Methods

2.1. Participants

The present research is a descriptive-correlation study aimed at predicting tendency toward drugs upon family functioning and sensation seeking. Research population includes all the students of Yazd University who were studying there during the educational year of 2016 - 2017.

Equation of Tabachnick and Fidell (2007), $n = 50 + 8k$ (N: sample size and k: the number of predictors) for multiple regression analysis was used to calculate the minimum required sample size for the regression analysis for each group. The sample consisted of 350 students (175 female and 175 male). Five faculties were randomly selected among the existing faculties; then, students were selected based on convenience sampling method. Questionnaires were distributed by the researcher at the end of a class; however, students volunteered to participate in the research and they were informed that the results would be kept confidential.

2.2. Measures

2.2.1. Family Assessment Device (FAD)

FAD was used to evaluate family functioning. The questionnaire was composed by Epstein et al. (1983) with 60 items, the aim of which is to examine family functioning based on the Master’s model. This model identifies structural, occupational, and family interactive features, and determines six dimensions of family functioning including problem solving, relationships, roles and tasks, behavior management, efficient responsiveness, and involvement. Therefore, FAD has one subscale corresponding to each of these six dimensions; furthermore, a seventh subscale is formed to evaluate the whole family functioning (15). Miller et al. (1985) indicated that the FAD has adequate test-retest reliability and can differentiate significantly between clinician-rated healthy and unhealthy families (16). Validity and reliability of the FAD questionnaire have been assessed in Iran and the alpha coefficient for the whole questionnaire has been calculated to be 0.94. Higher scores in this questionnaire mean more unhealthy function. (17).

2.2.2. Addiction Potential Scale

Weed et al.’s drugs tendency questionnaire was used to evaluate addiction potential. The questionnaire has 39 items and is composed of three subscales; Addiction Potential Scale (APS), Addiction Acknowledgment Scale (AAS), and Mac Andrew’s Alcohol and Drunkenness Potential Scale (MACR). Weed et al. reported the reliability of APS questionnaire as 0.69 and 0.77 for a population of men and women, respectively (18). According to them, the reliability values were considerably acceptable. The reliability of APS in Iran was determined by Minooee as 0.53 through Cronbach’s alpha and as 0.53 through split off (19).

2.2.3. Sensation Seeking Scale

In order to measure sensation seeking, Zuckerman and Link (1968) compiled Sensation Seeking Scale in 40 two-statement parts, where the subject is required to choose one of the two statements of each part. This scale is composed of four secondary factors, namely adventure, experience seeking, escape inhibition, and weariness, each of which includes 10 questions (20). In Iran, Zakerman's Sensation Seeking Scale shows a reliability of .78, which seems acceptable (21).

2.3. Data Analysis

In order to analyze the data, Pearson Correlation as well as multiple Regression Analysis was administered using SPSS software v.23 after making sure that data were normally distributed using Kolmogorov-Smirnov test.

3. Results

Demographic data from the research shows that from the total number of the participants, 50% were male (175 individuals) and 50% were female (175 individuals). Furthermore, data suggests that 75.43% of the female students (132 individuals) and 2.85% of the male students (5 individuals) were married, 24.57% of the females (43 individuals) and 96.57% of the males (169 individuals) were single, and only one male student (0.57%) was divorced. Moreover, 98.85% of females and 97.14% of the males were Muslims, 1.14% of the females and 0.57% of the males were Christians, and 1.143% of the females and 1.142% of the males were Zoroastrian. Means and standard deviations of the family function, sensation seeking, and drugs tendency are shown in Table 1. As seen, males have a higher mean in all variables.

To find out if family function and sensation seeking have effects on predicting male and female students' tendency toward drugs, after examining data normality by

Kolmogorov-Smirnov test (Table 1), Pearson correlation was used.

The results of Pearson Correlation revealed that there is a significant positive relationship between male students' tendency toward drugs and sensation seeking ($r = 0.43$; $P < 0.05$), however, not family function; moreover, there is a significant positive relationship between females tendency toward drugs and their family functions ($r = 0.128$; $P < 0.05$) but not sensation seeking (Table 2).

In order to answer to the question "which of the components of sensation seeking and family function have more significant role respectively in male and female students' tendency to drugs", multiple regression analysis was used.

Before implementing regression test, in addition to normal distribution, autocorrelation and multicollinearity assumptions were checked by the Durbin-Watson test and VIF value. The results of Durbin-Watson test admit that the observations were independent (indices ranged from 1.5 to 2.5). VIF values for each variable were less than 10, thus, the data did not violate the multicollinearity assumption.

According to Table 3, it can be concluded that only one of the components of sensation seeking (adventure seeking) has a significant role in predicting male students' tendency to drugs ($P < 0.05$) and among the components of family functioning, only family roles have a significant effect in predicting female students' drugs tendency ($P < 0.05$).

4. Discussion

Today, addiction is considered as a bio-psycho-social disease with various factors playing a role in tendency toward drugs abuse. A combination of these factors leads to drugs abuse and subsequently to addiction. Recent research has focused on multiple etiology of addiction. Although much emphasis has been placed on social factors, drugs addiction can also be related to psychological-biological factors as well (22). Among the effective factors on drugs tendency, one can refer to sensation seeking and

Table 1. Mean, Standard Deviation and Kolmogorov-Smirnov Test for the Normal Distribution of Data

Variable	Mean \pm SD	Kolmogorov-Smirnov Statistic	P Value
Drugs tendency			
Female	20.11 \pm 4.25	0.097	0.215
Male	21.34 \pm 4.37	0.132	0.051
Family function			
Female	139.7 \pm 14.76	0.158	0.061
Male	142.80 \pm 15.43	0.071	0.502
Sensation seeking			
Female	16.06 \pm 4.58	0.097	0.059
Male	19.65 \pm 4.34	0.132	0.452

Table 2. Pearson's Test to Examine the Relationship of Drugs Tendency with Family Functioning and Sensation Seeking

Variable	Drugs Tendency	P Value
Family function		
Female	0.128	0.0205
Male	-0.068	0.502
Sensation seeking		
Female	0.097	0.338
Male	0.43	0.001

Table 3. Regression Test to Examine the Significance of Sensation Seeking and Family Functioning Component in Predicting Drugs Tendency of Male and Female Students

Predicting Variables	B	S.E	Beta	T	P Value
Independent Variable (Group): Drugs Tendency (Male Students)					
Sensation seeking components					
Experience seeking	0.40	0.28	0.39	1.42	0.15
Adventure	0.83	0.27	0.62	2.29	0.02
Weariness	0.12	0.24	0.12	0.51	0.61
Escaping inhibition	0.25	0.25	0.253	1.1	0.32
Independent Variable (Group): Drugs Tendency (Female Students)					
Family function components					
Problem solving	0.07	0.17	0.07	0.41	0.68
Relationships	0.05	0.27	0.05	0.19	0.85
Roles	0.28	0.13	0.28	2.22	0.02
Efficient involvement	0.07	0.15	0.06	0.43	0.66
Behavior management	0.04	0.16	0.03	0.23	0.81
General function	0.02	0.15	0.01	0.13	0.90
Efficient response	0.12	0.23	0.11	0.51	0.61

family functioning, which have been investigated in the present study.

Results of the present study showed that sensation seeking, adventure seeking subscale in particular, has a predicting role in male students' tendency to drugs. This finding is in agreement with previous studies conducted by Hittner and Swickert (11), Kalichman et al. (23), and Chandra et al. (24), Sznitman and Engel-Yeger (25), who emphasized on the relationship between sensation seeking and addiction. White (26), in his research on students showed that individual differences and personality traits could be a risk factor for tendency to drugs. In addition, Jensen et al. (27) studied the sensation-seeking at the onset of alcohol, tobacco and marijuana consumption. Their findings revealed that sensation-seeking can play an important and prominent role in the initial use of drugs.

In explanation of this finding, a point to be considered is that in this research, our sample included university students. Young people, compared to other age groups, mostly seek risks, incidents, and new experiences. This tendency motivates them to experience drugs use, too. On the other hand, in the Iranian community, boys are provided with the opportunity to display sensation seeking more freely, and in many cases, demonstration of sensation seeking behaviors is admitted not only from the family's point of view but also from the perspective of the society. In such cases, family may have reinforcing roles for sensation seeking behaviors. Integration of family and community attitudes toward adventurous behaviors may lead boys to adventurousness, and in some cases, to risky behaviors such as using drugs. Therefore it can be said that predicting

boys' involvement in using drugs, based on sensation seeking and adventurousness seems rational, as indicated by the findings of the present research.

Another finding of the current study revealed that family function, roles subscale in particular, has a significant role in predicting female students' drug tendency. This finding is in agreement with the studies conducted by Kling and Piggott (28), Farhoudian et al. (29), and Bortolon et al. (30). In addition, Massah et al. (31), showed that family function has a significant correlation with the students' tendency toward drug use and can be a powerful variable to predict the potential for drug use. In explaining this finding, it can be said that roles in family, which forms the general behavioral pattern affect women. Due to their physiological characteristics and their physical and emotional needs, women are more vulnerable than men. In the Iranian community, females receive more family support and attention than males. This can serve as both a protective factor and threatening factor regarding emotional sensitivities of the women. In fact, poor family functioning, lack of parental support, contradiction between parents, and lack of family solidarity are threatening factors to women, and if the parents fail to carry out their parental role appropriately, girls will be vulnerable to addiction, as stated by the findings.

4.1. Conclusions

In summary, sensation-seeking (especially adventure seeking) in boys and family function (especially roles) in girls can predict their drug tendency. Considering the frequency of addiction in today's world, particularly among

the youth, preventive and intervention actions considering the mentioned risk factors is necessary. As a result, we suggest informing university students about potential characteristics and teaching them helpful coping strategies. In addition, holding workshop to notify parents about effect of inefficient families' function, which causes their children to become more susceptible to tendency to drugs. This study has several limitations. First, data was collected using self-report tools. Although for increasing the probability of accurately response to questionnaire, especially Addiction Potential Scale, was performed anonymously. Second, the examined of some variables, which are known to influence addiction potential like social and economical factors were not included. A further limitation of the present study was that the sample consisted of undergraduate students then, the results should not be generalized to the general population. It is propose that this study be done with a wider scope in the general population and different age group.

Footnotes

Authors' Contribution: Fatemeh Sadat Hosseini and Fahimeh Dehghani designed the study and conducted literature searches and provided summaries of previous research studies. Saeid Vaziri Yazdi conducted the statistical analysis. Fatemeh Sadat Hosseini wrote the first draft of the manuscript and all authors contributed to and have approved the final manuscript.

Ethical Considerations: We do not have an ethical code but participation in the research is absolutely voluntary. We also use anonymous questionnaires.

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